DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-027679
Date Inspected: 30-May-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name: Andrew Keach and Bernie Docena

CWI Present:	☑ Yes	☐ No					
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS Tower

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

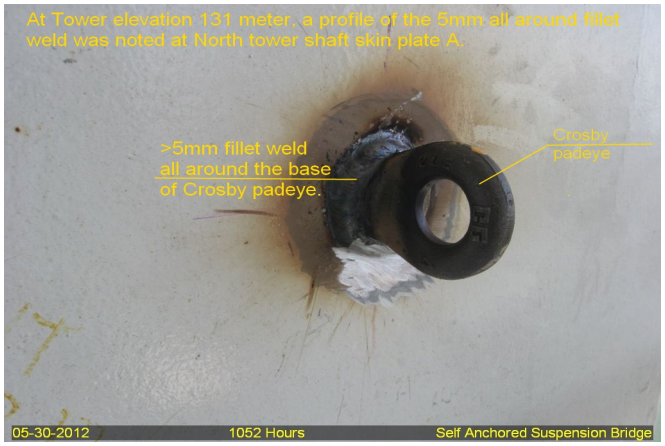
At Tower elevation 131 and 123 meter, QA randomly observed ABF/JV qualified Jeremy Dolman perform all position Shielded Metal Arc Welding (SMAW) fillet welding Crosby size number 4 padeye on tower skin plates. There were two padeyes being welded on tower skin plates A and E on tower shafts South and East while there are only two welded padeyes on tower skin plate A of tower shaft North and West. The padeyes are also being welded per Contract Change Order (CCO) #201 and per Caltrans approved drawing Tower Access Detail #30.

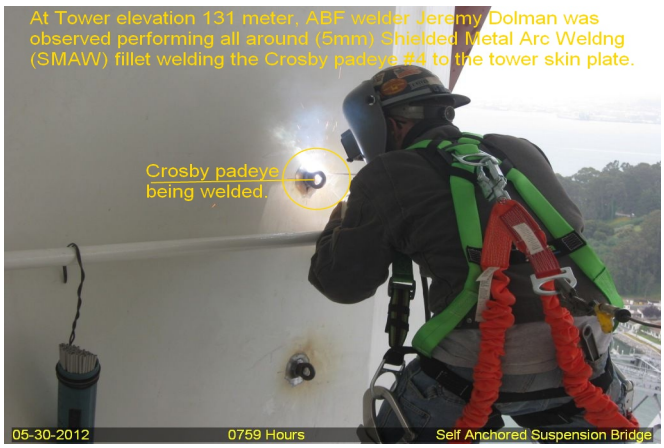
Prior welding, ABF foreman Rory Hogan was noted laying out the location of the padeyes and grinding off the paint on the tower where the padeye will be welded. After grinding, the same personnel preheated the tower skin plate to required temperature of more than 225°F. After reaching the required preheat temperature, ABF welder Jeremy Dolman performed the tack welding using SMAW with 3.2mm diameter E7018H4R electrode with measured working current of 130 amperes on the mentioned electrode.

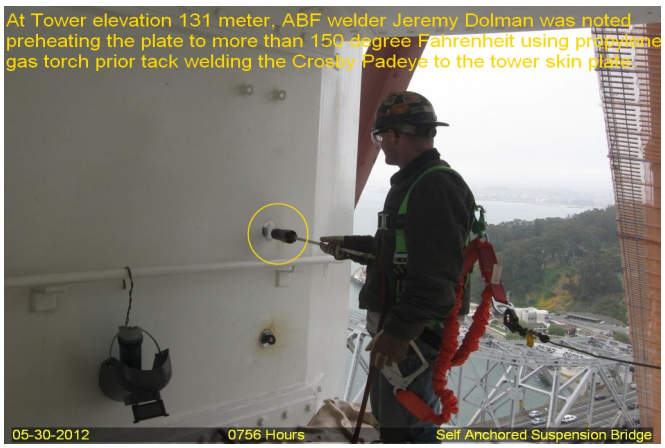
As soon as the padeye was tack welded, the welder immediately preheated the tower skin plate and the padeye itself to the required preheat temperature of more than 225°F. The welder then fully fillet welded the Crosby Padeye to 5mm all around fillet using the same electrode and diameter size implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D1.5-F1200A. During fillet welding, ABF QC Andrew Keach was observed monitoring the preheat temperature and working current.

At the end of the shift, the welder has completed fillet welding a total of 24 padeyes at tower four shafts of elevation 131 and 123 meter.

At Tower Base 13 meter diaphragm, ABF welder Xiao Jian Wan was observed continuing to perform 3G (vertical position) Shielded Metal Arc Welding (SMAW) welding fill pass on 250mm X 250mm X 60mm thick corner stiffener plate shop marked 380 PJP T-joint W139-1. The welder was noted using SMAW with 3.2mm diameter E7018H4R electrode on the fill to cover pass implementing Caltrans approved welding procedure ABF-WPS-D15-1170. The corner stiffener has a 45 degree double bevel configured for a Partial Joint Penetration (PJP) per detail drawing FWT28 of FWDT-2 Field Welding Schedule drawing. The stiffener plate is being welded to the 45mm diaphragm plate on one side and to the tower skin plate on the other side. The welder was noted welding alternately from one side to the other to avoid distortion. Prior welding, the plates were preheated to more than 150°F using propylene gas torch. This QA Inspector observed QC Inspector Bernie Docena using a Fluke infra red temperature gauge to verify the preheat temperature of more than 150°F. This QA Inspector performed a verification of the welding parameters and observed working current of 125 amperes on the 3.2mm diameter electrode. At the end of the shift, the 3G (vertical position) PJP T-joint SMAW welding was completed at 'S' location of South external diaphragm plate.







Summary of Conversations:

No significant conversation ocurred today.

WELDING INSPECTION REPORT

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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer